CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR-04/008c/CEMENT/2016-17 Date: 11.04.2016

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Technical Manager (West),** KRIDL, Bangalore.
***NAME OF THE WORK**	:	Providing connecting road to Navy Layout in Ward No.14, T. Dasarahalli Sub Division , BBMP, Bangalore.
***REFERENCE**	:	EE/DD/WO/07/2012-13 Dated: 15.06.2012
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	09.04.2016
PERIOD OF TESTING	:	09.04.2016 to 11.04.2016

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The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	30.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	160 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	485 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

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*Information is furnished by the Customer/Representative.

Note:

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR-04/008c/AGG/GR/2016-17 : 11.04.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Providing connecting road to Navy Layout in Ward No.14, T. Dasarahalli Sub Division , BBMP, Bangalore.

Reference : EE/DD/WO/07/2012-13 Dated: 15.06.2012

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 09.04.2016

Date of Testing : 11.04.2016

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.85	95-100	85-100
20	37.35	30-70	0-20
10	12.25	10-35	0-5
4.75	1.75	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.14/KRIDL /STEEL/2016-17

11.04.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	:	Providing connecting road to Navy Layout in Ward No.14, T. Dasarahalli Sub Division , BBMP, Bangalore.
Reference	:	EE/DD/WO/07/2012-13 Dated: 15.06.2012
Date of Test	:	11.04.2016
Technical Reference	:	IS: 1786-2008

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Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	8	0.40	510	552	13.10	O.K	O.K

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M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR-04/008c/CUBE/2016-17 20.04.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of the work** : Providing connecting road to Navy Layout in Ward No.14, T. Dasarahalli Sub Division , BBMP, Bangalore.

*** Reference** : EE/DD/WO/07/2012-13 Dated: 15.06.2012

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 7th day

Sample Received on : 20.04.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	13.04.2016	20.04.2016	8.115	352.3	15.66
2	13.04.2016	20.04.2016	8.236	362.3	16.10
3	13.04.2016	20.04.2016	8.345	370.2	16.45

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VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.14/KRIDL/WMM/AIV/2016-17

05.04.2016

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	Providing connecting road to Navy Layout in Ward No.14, T. Dasarahalli Sub Division , BBMP, Bangalore.
Reference	EE/DD/WO/07/2012-13 Dated: 15.06.2012
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	05.04.2016

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	379	382	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	78	79	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	303	
4	Aggregate Impact value = percent fines	20.58	20.68	
	100* (W_2/W_1)%			**21.00**

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.

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Job No: CTCE/BBMP/W.No.14/KRIDL/BM/Shape.T/2016-17 : 18.04.2016

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager (West),** KRIDL, Bangalore.
Name of Work	: Providing connecting road to Navy Layout in Ward No.14, T. Dasarahalli Sub Division , BBMP, Bangalore.
Reference	: EE/DD/WO/07/2012-13 Dated: 15.06.2012
Technical Reference	: IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	: Bituminious Macadum
Date of Testing	: 18.04.2016

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Flakiness Index = **11.23%**

Elongation Index = **13.10%**

Result : Combined Flakiness & Elongation index **24.33%**

Comments:

→ Maximum allowable Flakiness & Elongation Index for Bituminous Macadam is 30%

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M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com